

**BY ORDER OF THE COMMANDER**  
**552D AIR CONTROL WING (ACC)**

**552D AIR CONTROL WING (ACC)**  
**INSTRUCTION 21-1021**



**8 APRIL 2015**

***Maintenance***

***FOREIGN OBJECT DAMAGE (FOD) AND  
DROPPED OBJECT PREVENTION (DOP)  
PROGRAMS***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**ACCESSIBILITY:** Publications and forms are available on the e-Publishing website at [www.e-publishing.af.mil](http://www.e-publishing.af.mil) for downloading and ordering.

**RELEASABILITY:** There are no releasability restrictions for this publication

---

OPR: 552 ACW/CVF

Certified by: 552 ACW/CV  
(Col Brian A. Humphrey)

Pages: 11

---

This instruction prescribes 552 ACW FOD Prevention Procedures. It is applicable to all units assigned, attached, or deployed to the 552 ACW. This instruction implements AFI 21-101 CAFSUP\_I *Aircraft and Equipment Maintenance Management*, TINKERAFBI 21-449. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF IMT 847s through publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AF Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information System (AFRIMS) Records Disposition Schedule (RDS) or any updated statement provided by the AF Records Management office (SAF/CIO A6P).

**1. General FOD Policies and Procedures.**

- 1.1. Operating Locations (OLs) will participate in and follow host base FOD programs; however, OLs will notify 552 ACW FOD Monitor of FOD incidents involving 552 ACW aircraft.
- 1.2. The 552 ACW FOD Monitor will attend pre-construction briefings when they pertain to airfield repairs. During pre-construction conferences for construction contracts dealing with the airfield, the chief of the construction section, Engineering, and Contracts are responsible for briefing contractors on FOD prevention. The construction inspector will inspect

construction sites for compliance with the FOD prevention program and will identify potential FOD problems to the Contracting officer for corrective action.

1.3. Intake and exhaust plugs/covers will be kept in good condition and only used for their designed function. Intake or exhaust plugs/covers will only be removed when performing intake or exhaust inspections/maintenance, when operating the engines, or at crew-ready time. All aircraft will have inlet covers installed at all times when parked in Bldg 230 Docks 1-4, Bldg. 289 and Bldg 976. Covers will only be removed to perform maintenance/inspection and will be immediately reinstalled.

1.4. The “flight line area” is defined as all runways, taxiways, ramps and all concrete areas attached to them within the Entry Control Point (ECP) perimeter.

1.5. General FOD prevention awareness briefings will be delivered during maintenance orientation/refresher courses conducted by the Maintenance Training Flight (MTF). Work center specific FOD training will be provided to all personnel within 30 days of arrival and at least annually thereafter. Work center supervisors will indoctrinate all assigned personnel on the importance of the FOD Prevention Program to the mission and ensure personnel are familiar with the policies and procedures contained in this instruction. All personnel will be briefed on the dangers associated with aircraft and engine intakes prior to operation.

1.6. Vehicle foreign object containers will be secured at all times to prevent tipping over. Vehicle operators will ensure their vehicle is kept Foreign Object (FO) free at all times. This includes low speed vehicles. FO inspections shall be accomplished as part of the vehicle daily inspection and prior to use of the vehicle by any operator.

1.7. FO magnets will be cleaned of all FO at the beginning of every shift and the FO will be delivered to the 552 ACW FOD Monitor.

1.8. All motorized vehicles and support equipment are required to stop at each FOD check point and to perform a “Roll Over” FO check. Additionally, any vehicle leaving the finished surface will perform a “Roll Over” FO check immediately upon returning to the finished surface. Vehicle engines will be shut off and parking brakes will be set during tire FOD checks, unless a qualified driver remains in the driver’s seat. Emergency vehicles are exempted from performing the “Roll Over” FO check, if directly responding to an emergency situation.

1.9. No glass drink containers will be on the flight line or in vehicles on the flight line. All empty containers will be placed in FOD cans.

1.10. Consumables such as screws, bolts, washers, cotter pins, etc. will be placed in screw bags or zip lock type bags when taken to work areas. Loose hardware will not be carried in tool bags or individual’s pockets. All consumables will be accounted for after each job.

1.11. FO containers will be available when maintenance is performed on aircraft. FOD pouches/bags contained within a Composite Tool Kit (CTK) will be considered suitable to meet this requirement. Pouches/bags will have flip covers that secure with either snaps or Velcro.

1.12. Work areas will be thoroughly policed for FO as soon as each job is completed and policed immediately when an item is dropped or misplaced.

1.13. Hats may be worn in the areas completely surrounding Bldg 230 complex, 289 and 976. Hats will not be worn in the AWACS parking area. Exception: headgear/clothing authorized for extreme cold weather protection may be worn; however, every effort should be made to prevent such headgear from coming loose during duty performance. Wear of cold weather hats (i.e. watch caps) must not interfere with proper wear of hearing protection. Cold weather head gear (hats and hoods) must be removed and stowed when approaching within 25 feet of running aircraft engines.

1.13.1. Security Forces while performing official duties, may wear the beret with insignia attached, however, when they are within 50ft of an operating aircraft engine their berets must be removed and secured.

1.13.2. All personnel entering the flight line, with exception of those greeting DV's, will remove metal insignias/badges, (to include all combinations with the uniform i.e. ribbons, skill level badge, name tag, and US insignias) metal hair fasteners, wigs, hairpieces, earrings or any jewelry that may fall off without notice.

1.13.3. Remove and stow restricted area badge within 25 feet of operating engine(s). Ensure line badge clips are secured to prevent loss. For those individuals

1.13.4. Escorts of visiting personnel will ensure FOD prevention measures are taken.

1.14. Pintle hook pins of all types will be secured by cable and swedge or chain to the pintle hook. Safety wire will not be used to secure pins. Pins will be installed in pintle hook at all times.

1.15. Prior to first flight of the day, the entire aircraft will be vacuumed for FOD with special attention being paid to flight deck areas.

1.16. Aircraft Commanders will brief FOD prevention and response actions during mission planning.

**2. FOD Reporting.** In the event of a suspected or confirmed FOD incident, report IAW the following procedures:

2.1. The individual discovering the damage will:

2.1.1. Notify AMU Production Supervisor, who will notify the Maintenance Operations Center (MOC) immediately.

2.1.2. Provide the 552 ACW FOD Monitor with the following data to complete the ACC initial report:

2.1.2.1. Date and time of discovery

2.1.2.2. Aircraft tail #

2.1.2.3. Brief description of incident

2.1.3. Aircrew will complete 552 ACW Form 41, *552 ACW Aviation Incident/Unusual Occurrence Worksheet* and forward to 552 ACW/SE.

2.2. Upon notification of a FOD incident, MOC will:

2.2.1. Notify the MXG/CC with all available information.

2.2.2. Notify 552 ACW/CVF, 552 ACW/SE, and MXG/QA of aircraft tail number, parking location, time of discovery and give a brief description of damage resulting from the FOD incident.

2.3. The 552 ACW FOD Monitor will:

2.3.1. Conduct an investigation IAW AFI 21-101 and AFI 21-101 CAFSUP1 to determine if the incident was a preventable FOD incident and chargeable to the wing FOD rate, using the local 552 ACW FOD checklist. Results of the investigation will be briefed to the 552 ACW/CV.

2.3.2. Provide initial report of incident to HQ ACC/A4MP, 552 ACW/CV and MXG leadership as soon as reportable damage is known, but no later than 24 hours after occurrence.

2.3.3. Forward finalized report to HQ ACC/A4MP no later than 72hrs after notification of FOD incident. If a finalized report cannot be accomplished in 72hrs due to special circumstances (i.e. Engine safety investigation) a follow up report will be required every 45 days until it can be closed out.

### **3. FOD Walks/Bosses.**

3.1. 552 MXG personnel will FOD walk the parking spot and taxiway of all aircraft that launch prior to the mass FOD walk. A mass FOD walk will be initiated no later than 0800L (Weather Permitting) (Example: Lightning within 5NM). The wing FOD Monitor or Quality Assurance representative will ensure personnel are spaced appropriately to provide complete coverage of the area (no more than 10 feet apart), and personnel are not dismissed until the person(s) leading the FOD walk release them back to their duty sections. Close attention will be paid to expansion joints, seams, and grounding points for small stones, deteriorating concrete, loose tar and hardware during all FOD walks/inspections.

3.2. 552 MXS AGE, 552 MXS Corrosion, 552 MXS ISO, 552 MXS Computer/Radar, 552 MXS Fuel Cell and 552 MOF will perform FOD walks every Wednesday prior to 1000L in accordance with the areas of responsibility identified. (*See Attachment 2*)

3.3. When FO is discovered on the flight line, the area will be cleaned immediately. If the debris is excessive, personnel should contact MOC or Airfield Management to request sweeper dispatch.

3.4. FOD Bosses will be utilized by squadron maintenance personnel a minimum of three times a week. FOD Bosses will be used and maintained in accordance with the equipment operator's guide. 552 AMXS will develop a plan for sweeper usage. FOD Bosses are for flight line use only and will be disconnected from vehicles leaving the flight line area. Only the 552 MXG/CC, 552 MXG/CD or 552 MXG/CM can authorize a deviation from FOD Boss usage due to weather, manning or mission.

3.5. Work centers will ensure the dumpster areas are kept FO free and dumpster lids are kept closed.

### **4. Unit FOD Monitors.**

4.1. 552D Maintenance Group and 552D Operations Group Squadron commanders will designate, in writing, a primary and alternate FOD Monitor and forward a copy to the 552 ACW FOD Monitor. These letters will be reviewed and updated annually.

4.2. An area for FOD information will be maintained in each work center. Placement is at the unit discretion. The location should afford the greatest possible access and visibility to work center personnel. The unit's FOD Monitor shall ensure information is current.

## 5. FOD Incentive Programs.

5.1. **FOD Walk Golden Bolt Award:** The FOD Walk Golden Bolt Award is designed to indicate the effectiveness of daily FOD walks. Weekly during a FOD walk, an item simulating a piece of hardware/safety wire will be strategically placed within the FOD walk area. The individual who finds it will be granted a one-day pass given by 552 ACW/CV. This item simulating a piece of hardware/safety wire will be under constant supervision while it is in the FOD walk area.

5.2. **MX Golden Bolt Award:** The MX Golden Bolt Award is presented quarterly to the 552 MXG AMU, flight, or backshop with the best FOD Prevention Program. At a minimum the following areas are looked at and used as judging criteria: involvement in FOD prevention incentive programs, FOD walk participation, lost tool/object assessment data and utilization of a FOD Awareness Board.

5.3. **The Sentry FOD Award:** The Sentry FOD Award is presented quarterly to a 552 OG squadron with the best FOD Prevention Program. At a minimum the following areas are looked at and used as judging criteria: involvement in FOD Prevention incentive programs, FOD Walk participation, lost tool/object data, FOD assessment data and utilization of a FOD Awareness Board.

5.4. **The FOD Poster Contest:** A FOD Poster Contest will be held bi-annually to promote the FOD Prevention program. Anyone assigned to 552 ACW is eligible to participate. Posters depicting an act or actions emphasizing FOD prevention can be submitted to the 552 ACW FOD Monitor. Posters should be creative and original in design. The 552 ACW/CV or representative will decide which poster best emphasizes and enhances the FOD Prevention program. The winner will receive a one-day pass from the 552 ACW/CV, an award, and the poster will be submitted HQ ACC for distribution to CAF.

5.5. **The FOD Slogan Award:** The FOD Slogan Award contest will be held bi-annually to promote the FOD Prevention program. Anyone assigned to 552 ACW is eligible to participate in this program. Slogans that enhance and emphasize the importance of FOD Prevention can be forwarded to the 552 ACW FOD Monitor. The 552 ACW/CV or representative will decide which slogan best emphasizes and enhances the FOD Prevention program. The winner will receive a one-day pass from the 552 ACW/CV, an award and their FOD slogan will be displayed on Slogan Award signs around the 552 ACW.

5.6. **Eagle Eye Awards:** Eagle Eye awards are presented quarterly to three individuals of the 552 ACW for their efforts in detecting and preventing potential FOD mishaps. To submit an individual for the award, report to the FOD Office (Bldg 230 SE129) and fill out the local 552 ACW Eagle Eye form; bring the found FOD item, if applicable. The winners will receive a one-day pass from the 552 ACW/CV and award.

**6. FOD Awareness Efforts.** To boost FOD awareness in the wing, the FOD Monitor will:

6.1. Maintain a FOD Prevention bulletin board. The board will display, at least, the following items:

6.1.1. 552 ACW FOD Monitor and Assistant Monitor names and contact information.

6.1.2. FOD Flashes. (As Needed)

6.1.3. Quarterly FOD incentive program award winners.

6.1.4. FOD Grams.

6.2. Maintain a log of all personal items and equipment left on aircraft.

6.3. Perform spot inspections of 552 ACW maintenance areas. The maintenance area is divided up into five (5) different geographical areas. One area is inspected daily on a rotating basis. All inspections are logged into spot inspection database based upon severity. Areas with a moderate or severe rating will be reported to the appropriate squadron representatives and squadron commander.

**7. General DOP Policies and Procedures.**

7.1. All assigned maintenance personnel will be briefed on the DOP program by the Maintenance Training Flight or the 552 ACW DOP Monitor. Recurring DOP training will be given to all aircraft maintainers annually.

7.2. Squadron and Aircraft Maintenance Unit (AMU) maintenance supervisors will ensure that prior to each sortie and after all scheduled maintenance is completed, a qualified maintenance technician will perform a secondary structure/panel inspection. Special emphasis will be placed on those items having a high vulnerability for loss (i.e. dry bay panels, oil servicing panels, etc.). Special attention will be directed toward those items involved in last minute (Red Ball) maintenance to ensure any opened doors, panels, cowlings, etc. have been properly secured.

**8. DOP Reporting.** In the event of a suspected or confirmed DOP incident, report IAW the following procedures:

8.1. The individual discovering the DOP will:

8.1.1. Notify AMU Production Supervisor, who will notify the Maintenance Operations Center (MOC) immediately.

8.1.2. Provide the 552 ACW DOP Monitor with the following data to complete the ACC initial report:

8.1.2.1. Date and time of discovery

8.1.2.2. Aircraft tail #

8.1.2.3. Brief description of incident

8.2. The Aircraft Commander will complete 552 ACW Form 41552 *ACW Aviation Incident/Unusual Occurrence Worksheet*, and forward to 552 ACW/SE.

8.3. Upon notification of a DOP incident, MOC will:

8.3.1. Notify the MXG/CC with all available information.

8.3.2. Notify 552 ACW/CVF, 552 ACW/SE and MXG/QA of aircraft tail number, parking location, time of discovery and give a brief description of damage resulting from DOP incident. 8.4. The 552 ACW DOP Monitor will:

8.4.1. Conduct an investigation IAW AFI 21-101 and AFI 21-101 CAFSUP1 to determine if the incident was a preventable DOP incident using the local 552 ACW DOP checklist. Results of the investigation will be briefed to the 552 ACW/CV.

8.4.2. Provide initial report of incident to ACC/A4MP, 552ACW/CV and MXG leadership as soon as reportable damage is known, but no later than 24 hours after occurrence.

8.4.3. Forward finalized report to ACC/A4MP no later than 3 duty days after notification of DOP incident.

## **9. DOP Awareness.**

9.1. The 552 ACW DOP Monitor will maintain a DOP Prevention bulletin board. The board will display, at least, the following items:

9.1.1. 552 ACW DOP Monitor and Assistant Monitor names and contact information.

9.1.2. DOP Flashes (as needed)

JAY R. BICKLEY, Colonel, USAF  
Commander, 552D Air Control Wing

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

**AFMAN 33-363**, *Management of Records*, 1 March 2008

**AFI 21-101**, *Aircraft and Equipment Maintenance Management*, 26 July 2010

**AFI 21-101, CAFSUPI**, *Aircraft and Equipment Maintenance Management*, 11 July 2012

**TINKERAFBI 21-449**, *Foreign Object Damage and Dropped Object Prevention Programs*, 11 March 2009

***Prescribed Forms***

**552 ACW Eagle Eye Submission Form**

**552 ACW Form 41**, *552 ACW Aviation Incident/Unusual Occurrence Worksheet*

***Adopted Forms***

**AF Form 847**, *Recommendation for Change of Publication*

***Abbreviations and Acronyms***

**ACC/A4MP**—Lead Command

**ACW**—Air Control Wing

**ACW/CV**—Air Control Wing Vice Commander

**ACW/CVF**—Air Control Wing FOD/DOP Monitor

**ACW/SE**—Air Control Wing Safety

**CAF**—Combat Air Forces

**AGE**—Aircraft Ground Equipment

**AMXS**—Aircraft Maintenance Squadron

**AMU**—Aircraft Maintenance Unit

**AWACS**—Airborne Warning and Control System

**CTK**—Composite Tool Kit

**DOP**—Dropped Object Program

**DV**—Distinguished Visitor

**FO**—Foreign Object

**FOD**—Foreign Object Damage/Debris

**HQ ACC**—Headquarters Air Combat and Command

**IAW**—In Accordance With

**ISO**—Isochronal



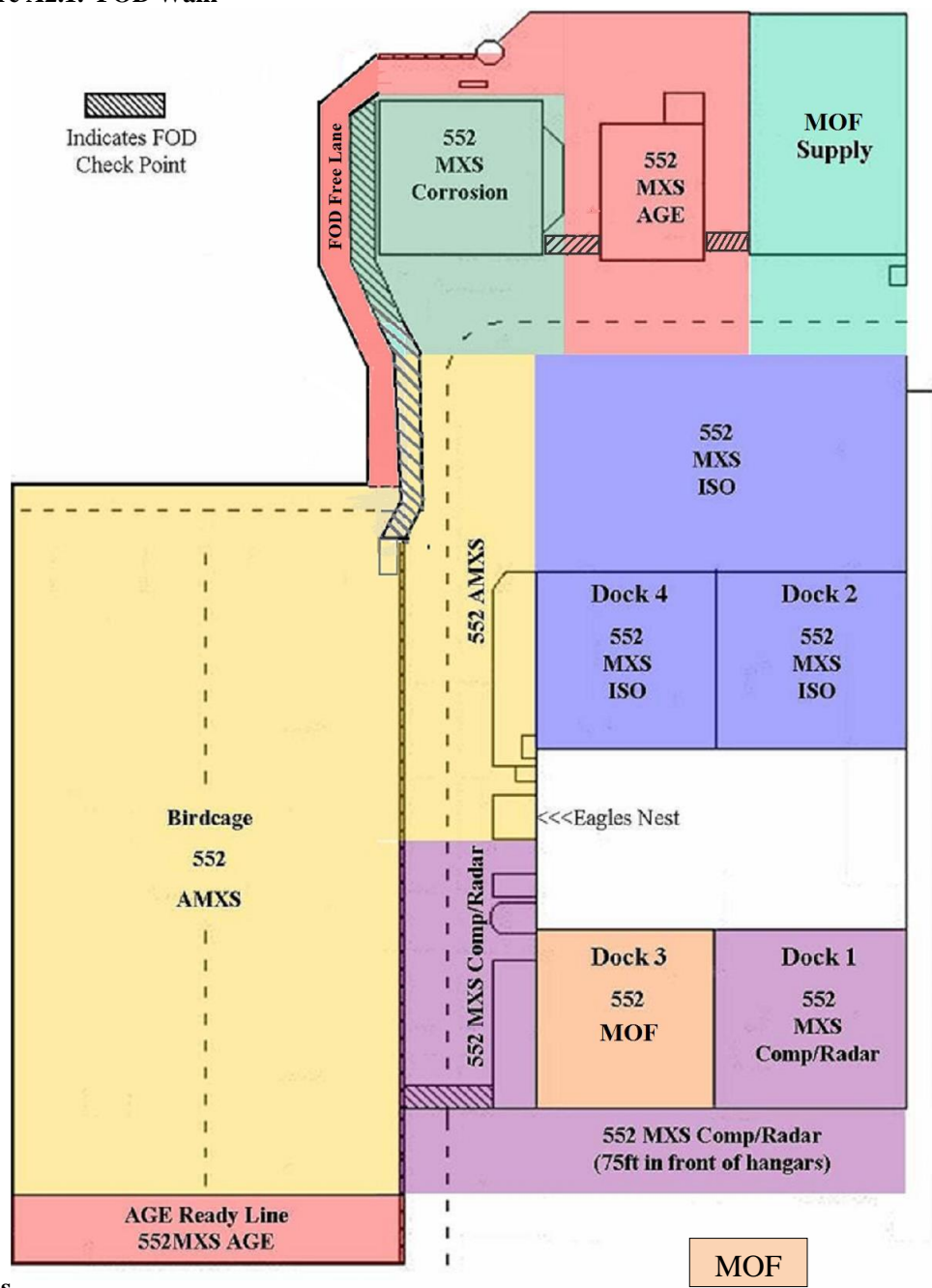
**MAJCOM**—Major Command  
**MOC**—Maintenance Operations Center  
**MOF**—Maintenance Operations Flight  
**MTF**—Maintenance Training Flight  
**MX**—Maintenance  
**MXG**—Maintenance Group  
**MXG/CC**—Maintenance Group Commander  
**MXG/CD**—Maintenance Group Deputy Commander  
**MXG/CM**—Maintenance Group Superintendent  
**MXG/QA**—Maintenance Group Quality Assurance  
**MXS**—Maintenance Squadron  
**OLs**—Operating Locations  
**OG**—Operations Group  
**RDS**—Records Disposition Schedule

### *Terms*

**Red Ball Maintenance**—The term —Red Ball is a traditional descriptor, recognized throughout aircraft maintenance, and defines a situation requiring a sense of urgency and priority actions. “Red Ball” maintenance normally occurs two hours prior to launch and until aircrew have released the aircraft back to maintenance. The Red Ball maintenance concept is intended to prevent late takeoffs and aborts by having qualified maintenance personnel available (e.g., in a truck or standby in the shop) during launch and recovery operations to troubleshoot, isolate, and repair system malfunctions. Red Ball maintenance in no way authorizes technicians to take shortcuts or deviate from TOs, personnel safety requirements or fail to properly document the aircraft forms and the MIS for all completed repair actions.

## FOD WALK AREAS OF RESPONSIBILITIES

## Areas



## Attachment 3

## 552 ACW EAGLE EYE SUBMISSION FORM

Place foreign object/s in a bag and submit with this form. Route object/s and form to the ACW FOD Monitor 552ACW/CVF, Bldg. 230, Rm. SE 129 (QA/PIM office), or give it to your unit FOD representative or supervisor.

Table A3.1. 552 ACW EAGLE EYE SUBMISSION FORM

Date _____	
Nominee Rank/Name _____	
Squadron _____	
Contact Info _____	
Item/s Found _____	
When?(Check all that apply)	<input type="checkbox"/> FOD Walk <input type="checkbox"/> Performing MX <input type="checkbox"/> Other _____
	<input type="checkbox"/> In transit between jobs <input type="checkbox"/> During Inspection
<i>Notes</i>	
Where?(Check all that apply)	<input type="checkbox"/> Dock 1 _____ <input type="checkbox"/> Dock 2 _____ <input type="checkbox"/> Dock 3 _____ <input type="checkbox"/> Dock 4 _____ <input type="checkbox"/> 289 _____ <input type="checkbox"/> 976 _____ <input type="checkbox"/> AGE _____ <input type="checkbox"/> AGE "Ready Line" _____ <input type="checkbox"/> Birdcage (around what spot) _____ <input type="checkbox"/> Other _____
If found near ACFT, please indicate where on the graphic below.	
